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TITLE: Delivery system secured storage container method involves assigning personal access code to customer, and unlocking lockable opening of enclosure when signal representing code is generated

INVENTOR: STILLMAN, T B

PATENT-ASSIGNEE: STILLMAN T B (STILI)

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Search Selected

Search ALL

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> WO 200108078 A1	February 1, 2001	E	019	G06K005/00
<input type="checkbox"/> AU 200057291 A	February 13, 2001		000	G06K005/00

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INT-CL (IPC): G06K 5/00

ABSTRACTED-PUB-NO: WO 200108078A

BASIC-ABSTRACT:

NOVELTY - A personal access code is assigned to a customer in whose premises an enclosure capable of being secured by a lockable opening is provided. The lockable opening is unlocked when a signal representing the customer's personal access code is generated to enable the delivery or pick-up of a parcel to or from the enclosure.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a system of apparatus for enabling vendors and delivery services to deliver and pick up parcels to and from the premises of a customer.

USE - For delivery service businesses e.g. overnight courier, parcel post, mail services. Also for local business establishments e.g. fast food restaurants, grocery stores, dry cleaners.

ADVANTAGE - Eliminates need for delivery person to bring package back for delivery on another day when addressee is not at home. Enables convenient pick-up at home of person who wishes to ship a parcel and who may not be at home when delivery or pick-up service person arrives.

DESCRIPTION OF DRAWING(S) - The figure is the flowchart of the delivery system secured storage
container method.

ABSTRACTED-PUB-NO: WO 200108078A

EQUIVALENT-ABSTRACTS:

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DERWENT-CLASS: T01 T04

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(71) Applicant and

(72) Inventor: STILLMAN, Thomas, B. [US/US]; 11141 E. Childs Avenue, LeGrand, CA 95333 (US).

(74) Agents: BACKUS, Richard, E. et al.; Flehr Hohbach Test Albritton & Herbert LLP, Suite 3400, 4 Embarcadero Center, San Francisco, CA 94111-4187 (US).

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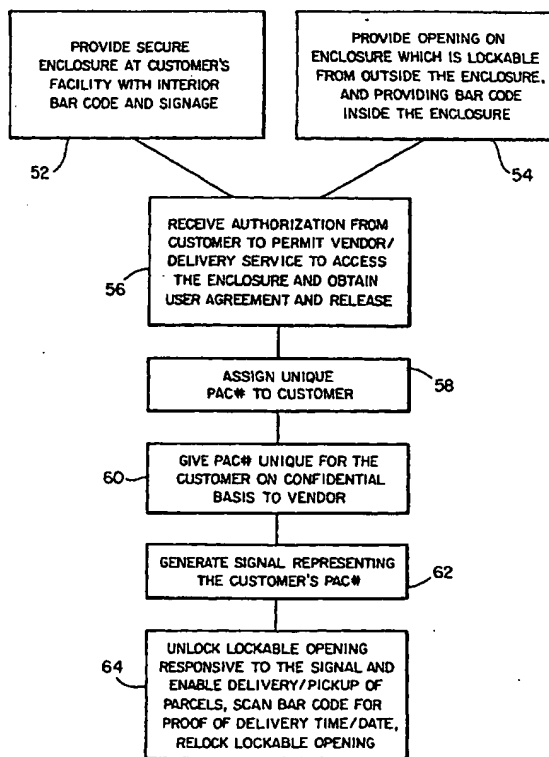
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- With international search report.
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[Continued on next page]

(54) Title: DELIVERY SERVICE SECURED STORAGE CONTAINER SYSTEM, APPARATUS AND METHOD



(57) Abstract: A delivery service secured storage container system and method for enabling vendors and delivery services to deliver and pick up parcels to and from the premises of customers. The system includes an enclosure (10) having a lockable opening (14, 22), and a signal receiving device associated with the enclosure for unlocking the lockable opening responsive to an unlock signal which is unique to a personal access code assigned to the customer.

WO 01/08078 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

DELIVERY SERVICE SECURED STORAGE CONTAINER
SYSTEM OF APPARATUS AND METHOD

BACKGROUND OF THE INVENTION

This application claims the benefit of U.S. provisional application serial no.
5 60/138,088 filed June 8, 1999.

1. Field of the Invention

This invention relates in general to delivery service systems of apparatus and methods.

2. Description of the Related Art

10 There are well-established delivery service businesses of various types in the prior art. Among these are the overnight courier, parcel post or mail services by which one party can ship a parcel to another's home, office, commercial or industrial facility. Certain local business establishments, such as fast food restaurants, grocery stores or dry cleaners can deliver food or other products direct to a customer's
15 home, office or business. Consumers typically order the food or other products by means such as telephone, mail, facsimile or, more recently, through a computer over the Internet. Present delivery services have a number of disadvantages and limitations. For example, when the addressee is not at home the delivery person must either bring the package back for delivery on another day, return it for

signature or leave a message suggesting that the package can be picked up by the addressee or delivered on another day or to a different address, or the parcel can be left at the addressee's doorstep or given to the custody of a neighbor. In any of these events there is delay and inconvenience for the addressee to receive the
5 parcel, added expense to the delivery service, and possible loss or theft of the parcel should it be left at the addressee's home or place of business. Conventional delivery pickup services also do not provide for convenient pickup at the home of a person who wishes to ship a parcel and who may not be at home when the delivery/pickup service person arrives.

10 The need has therefore been recognized for a delivery service system of apparatus and method which obviates the foregoing and other limitations and disadvantages of prior art delivery/pickup services. Despite the various delivery/pickup services in the prior art, there has heretofore not been provided a suitable and attractive solution to these problems.

15 BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a flow chart showing the method steps of the invention.

Fig. 2 is a flow chart showing the methodology for channels of distribution of the invention.

20 Figs. 3, 4 and 5 show front and side views of a secured enclosure used in one embodiment of the invention.

Figs. 6, 7 and 8 show front and side views of a secured enclosure used in another embodiment of the invention.

Figs. 9, 10 and 11 show front and side views of a secured enclosure used in yet another embodiment of the invention.

Figs. 12, 13 and 14 front and side views of a secured enclosure used in still another embodiment of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The invention in general provides a system of apparatus and method that includes
5 a coordinated channel of distribution for all parcel and other delivery services. The invention specifically includes providing an enclosure together with a universal locking device, customer user agreement and liability release, personal access code numbers (hereinafter PAC#) which are unique to a customer, interior bar code to activate approved delivery companies' scanner, proof of delivery and a coordinated
10 channel of distribution.

The embodiment of the invention shown in Figs. 3-5 provides a free-standing or built-in system of apparatus comprising a secured enclosure 10 having an inner compartment 12 which is accessible by means of a door 14 hinged to one side of the enclosure. One or more removable shelves 16 can be provided within the
15 enclosure for holding parcels that are delivered to the customer or that are to be picked up by the delivery service. A rod 18 can be provided in the top of enclosure 12 for hanging garments, such as for delivery/pickup by a laundry or dry cleaner. On the built-in model the rear side 20 of the enclosure can be mounted into an opening formed in the customer's home, office or other facility. A door, not shown,
20 can be provided on rear side 20 for the customer to open and close, or the door could be omitted, as desired, for access into the enclosure.

A universal locking device 22 is provided for locking the door shut. Locking device 22 is comprised of a signal-activated lock which can be actuated from outside the enclosure. Lock 22 can be of the sliding-bolt type in which the bolt is enabled for
25 engagement with and disengagement from a lockplate on the frame in which the door is set. The bolt is enabled for disengagement by a signal which is input by the vendor/delivery service by means such as an alphanumeric keypad. The person sent by the vendor/delivery service to either drop off for delivery or pickup of a parcel

enters the customer's PAC# onto the keypad, thereby unlocking the door. Conventional locks operated by keypads of this type are available on the market and can be utilized in this invention. However, it is anticipated that locks will be designed specifically for this purpose. The invention contemplates that the input
5 signal for activating locking device 22 can also comprise an electrical signal which transmits the customer's PAC# to a suitable receiver on the lock by other means, such as by wire or from a remote emf transmitter, for example infrared signals. The signal would then activate a suitable device, such as a solenoid, to move the bolt.

10 A bar code strip, shown at 23 in Fig. 3, is attached to the enclosure to allow for confirmation of delivery and to serve as a major part of security, access and product delivery pickup. The bar code is unique to each approved delivery company and has the customer's PAC# impregnated in it.

Figs. 6-8 illustrate another embodiment providing an enclosure 24 which is more compact than the first embodiment. A door 26 is hinged on one side to the enclosure, and a universal locking device 28 is provided in the door. A pair of
15 removable shelves 30 are provided within the enclosure, and a transverse rod 32 is provided at the tope of the enclosure for hanging garments.

Figs. 9-11 illustrate another embodiment providing an enclosure which includes means for cold storage of items to be delivered or picked up, such as food. A door
20 36 is hinged to one side of the enclosure, and a universal locking device 38 is mounted on the door. Within the enclosure a space 40 is provided for holding items under a temperature-controlled environment, such as by conventional refrigeration means, not shown.

Figs. 12-14 illustrate another embodiment providing an enclosure 42 having a pair
25 of doors 44, 46 which are hinged at opposite sides of the enclosure. A universal locking device 48 is provided for locking both doors in their closed position shown in Fig. 12. Fig. 13 shows that the interior of the enclosure is provided on one side with a compartment 44 having a plurality of removable shelves 46. On the other

side a compartment 48 is provided and is separated from compartment 44 by a vertical wall 50. A temperature-controlled environment can be maintained in compartment 48 for either warm or cold storage, as desired.

In the general aspects of the method of the invention, secured enclosures of the type shown for the different embodiments described above can be provided for customers living nationwide. The units can be standardized in four convenient sizes, as in the four embodiments of Figs. 3-14, for low cost production. The units can be free standing in which both the delivery/pickup person and customer have access through the front door of the enclosure, or the units could be built into the customer's home or other facility so that only the customer has access to the rear of the enclosure. The units can be insulated and made weather proof, and can also have a reinforced door and security chain, not shown, for protection against theft. An electrical cord, not shown, can be provided for powering the cold storage or warmer unit, as well as lights and any other electrical accessories in the enclosure that may be desired. A foundation of concrete, sand or gravel can be provided at the bottom of the enclosure for stability where the unit is free standing. An electrical sensor, not shown, can be provided in the unit for recording the time and date of each delivery. In addition, a telephone jack connection, not shown, can be provided in the unit for remote signaling to acknowledge delivery of a package. A small locking box, not shown, on the interior can be provided to serve as a secured enclosure for delivering valuables such as jewelry and prescription drugs. It would have an additional lock.

As shown in the chart of Fig. 2, the size and shape of the enclosures illustrated in the drawings are suitable for accommodating weekly grocery shopping as well as packages from parcel delivery services, delivery of laundry, auto parts, internet purchases, catalog deliveries, hot or cold food products, dry cleaning and miscellaneous items.

It is contemplated that the delivery/pickup method of the invention will be approved by the United States Postal Service as a secured storage system for delivered parcels.

Such approval would carry with it the advantage that it would be a federal offense for tampering with it or taking contents from the units without authorization.

The flow chart of Fig. 1 shows the steps in the method of the invention. In step 52 the secured enclosure as described above is provided at the customer's facility, such as a home or office. At step 54 a signal-activated lock is provided which can be actuated from outside the enclosure. The lock can be comprised of the type described above in which the input signal would be that in which the delivery/pickup person enters the customer's PAC# onto the keypad for unlocking the door. It could also be of the type which is unlocked remotely by an electrical signal, infrared or other light.

For commercial and industrial centers, the system will be established at designated shipping and receiving areas. Also at step 52 a sign is located inside the enclosure on a wall or door and displays a bar code as well as suitable indicia provides instructions or other information for the delivery person. The delivery person uses a suitable scanner which reads the bar code, which is encoded with the customer's PAC#.

In the next step at 56 each customer using the system is provided with a unique identifier, which can be alphanumeric, such as a PAC#. In order to obtain the PAC# or other identifier, the customer would sign an agreement to allow the delivery service, such as Federal Express, UPS or the like, to have access to that customer's enclosure unit. This is shown as step 58 in Fig. 1.

In the next step at 60 the customer's PAC# is given when ordering through catalogs or other vendors. The PAC# is then entered at the origin of the parcel at step 62. This is when a delivery or pickup is to be made, and the customer's PAC# is input by the driver or other delivery service person into the keypad or other input device, which could also be by means of an emf signal. The door of the enclosure is then unlocked at step 64 to enable either delivery of parcels into the enclosure or pickup of an item that the customer wants delivered.

The bar code inside is then scanned by the approved delivery person's scanner, which confirms the time, data and location of parcel delivery. The door is then shut and relocked.

What is claimed is:

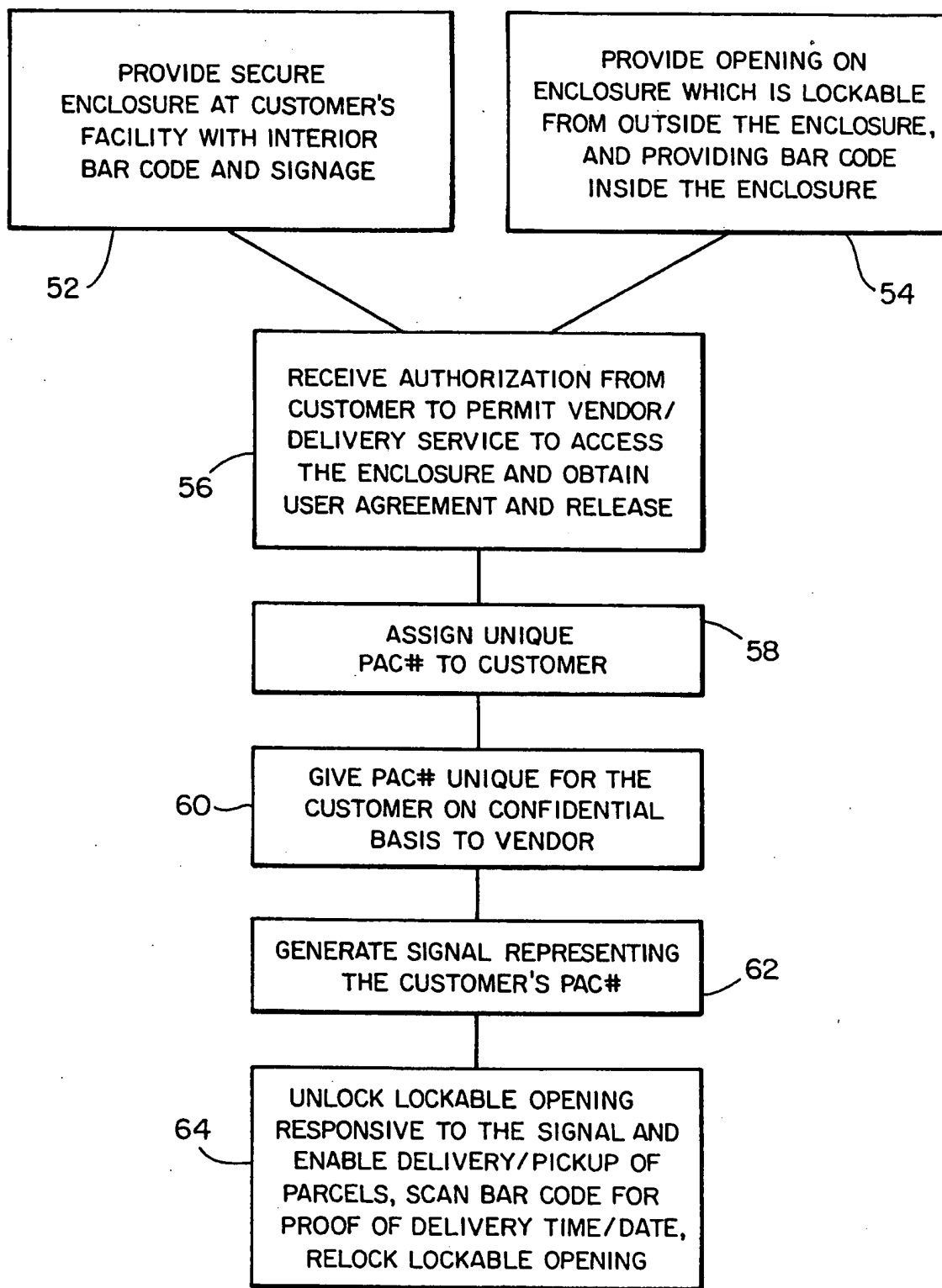
1. A method for enabling vendors and delivery services to deliver and pick up parcels to and from the premises of customers comprising the steps of providing at the customer's premises an enclosure which is capable of being secured by a lockable opening, assigning a personal access code to the customer, providing the personal access code to a vendor or deliver service, generating a signal representing the customer's personal access code, and unlocking the lockable opening responsive to the signal to enable the delivery or pick up of a parcel to or from the enclosure.
2. A method as in claim 1 and further comprising the steps of providing bar code indicia at the enclosure in which the bar code is encoded with the personal access code.
3. A method as in claim 1 in which the step of providing the personal access code to a vendor or deliver service is on a confidential basis.
4. A method as in claim 1 in which the step of generating the signal comprises inputting the personal access code on a keypad, and unlocking the lockable opening responsive to inputting of the personal access code on a keypad.
5. A method as in claim 1 in which the step of generating the signal comprises producing an emf signal, and unlocking the lockable opening responsive to the emf signal.
6. A method as in claim 2 and further comprising the steps of providing bar code indicia with data selected from the group consisting of proof of the delivery or pick-up, time of the delivery or pick-up or date of the delivery or pick-up, and scanning the bar code indicia to read said data.

7. A method as in claim 1 and further comprising the steps of obtaining a user agreement from the customer.
8. A method as in claim 1 and further comprising the steps of obtaining a release from the customer..
9. A method as in claim 1 and further comprising the step of relocking the lockable opening after the step of delivering or picking up the parcel from the enclosure.
10. A method as in claim 1 and further comprising providing the bar code on the inside of the enclosure.
11. A system of apparatus for enabling vendors and delivery services to deliver and pick up parcels to and from the premises of a customer, comprising the combination of an enclosure, the enclosure having a lockable opening, and a signal-receiving device associated with the enclosure for unlocking the lockable opening responsive to an unlock signal which is unique to a personal access code assigned to the customer.
12. A system of apparatus as in claim 11 and further comprising bar code indicia at the enclosure in which the bar code is encoded with the personal access code.
13. A system of apparatus as in claim 12 in which the bar code is on the inside of the enclosure.
14. A system of apparatus as in claim 11 in which a personal access code is unique to the customer.
15. A system of apparatus as in claim 12 in which the bar code is encoded with data selected from the group consisting of proof of the delivery or pick-up, time of the delivery or pick-up or date of the delivery or pick-up.
16. A system of apparatus as in claim 11 and further comprising a keypad

for generating the unlock signal.

17. A system of apparatus as in claim 11 and further comprising a means for generating an emf signal which produces the unlock signal.

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**FIG. 1**

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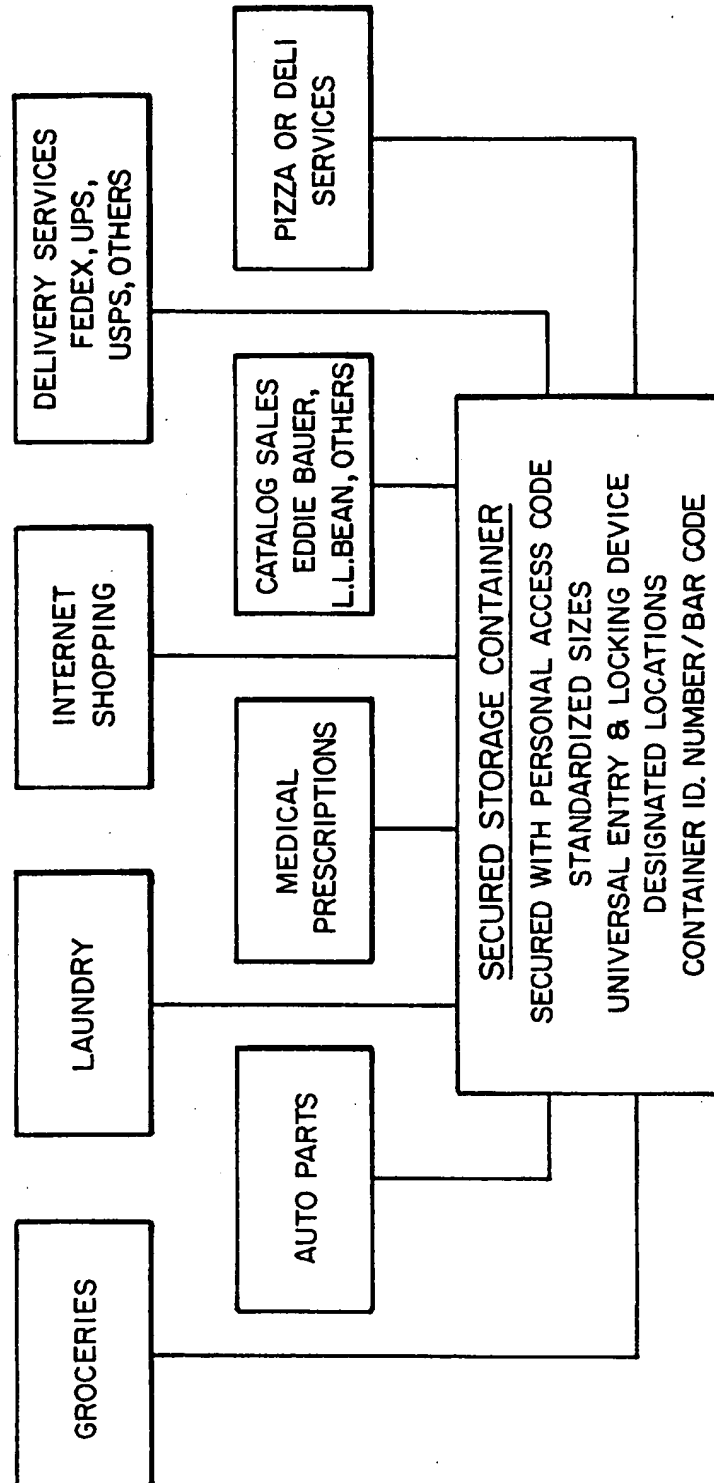
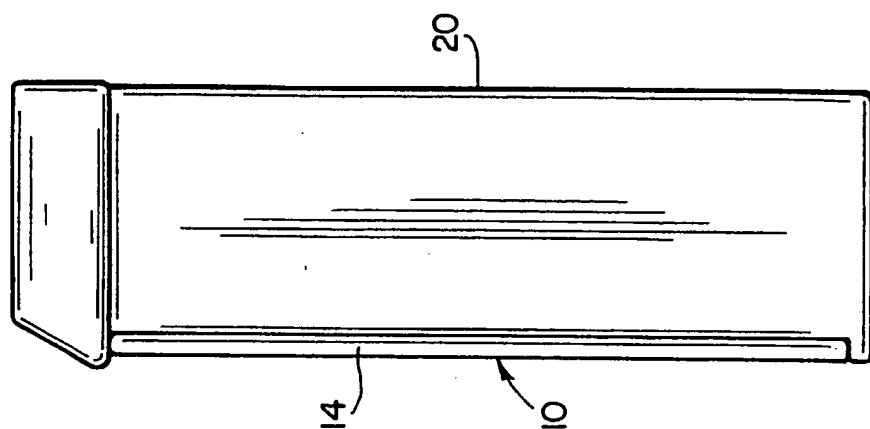
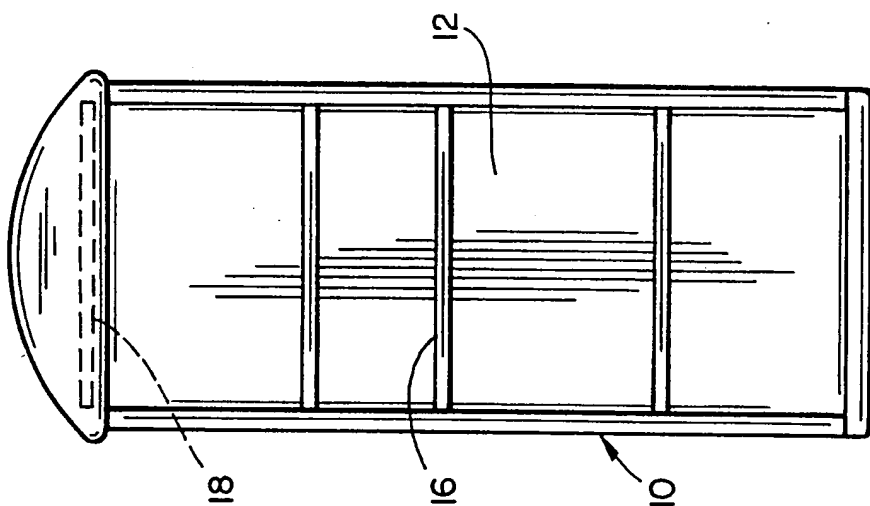


FIG-2

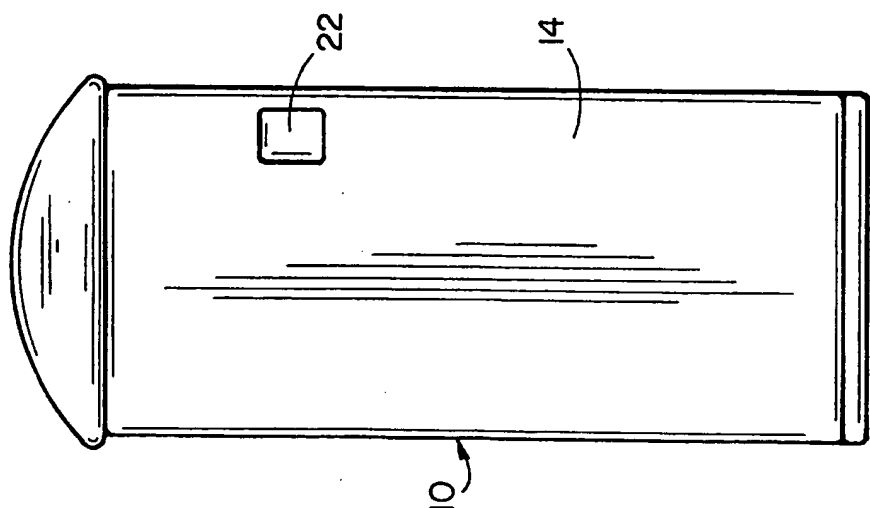
3/6



FIG_5



FIG_4



FIG_3

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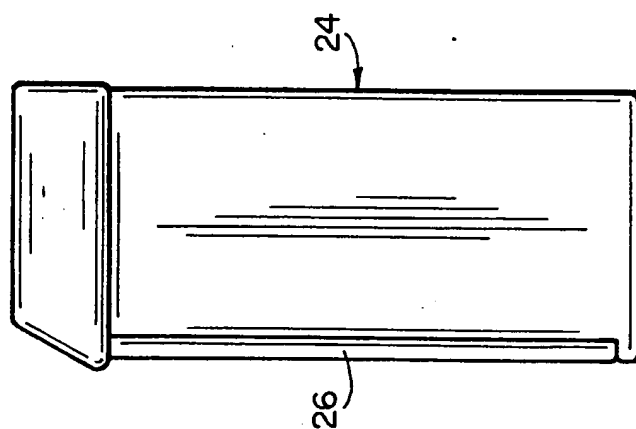


FIG-8

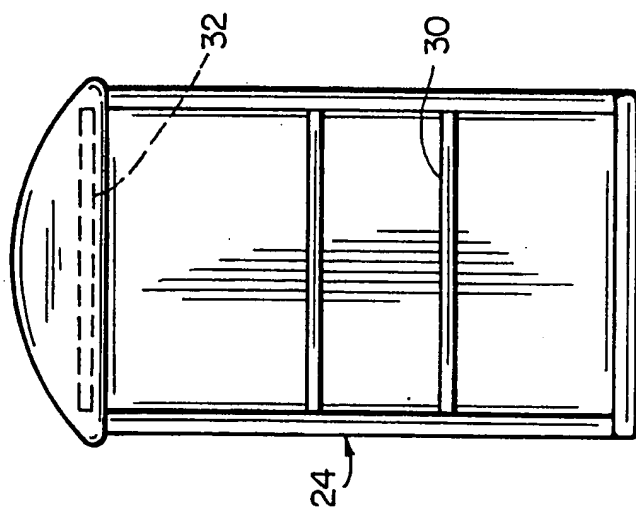


FIG-7

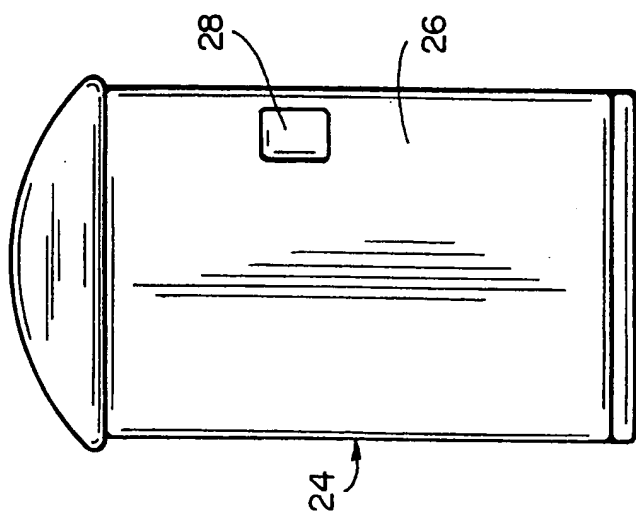


FIG-6

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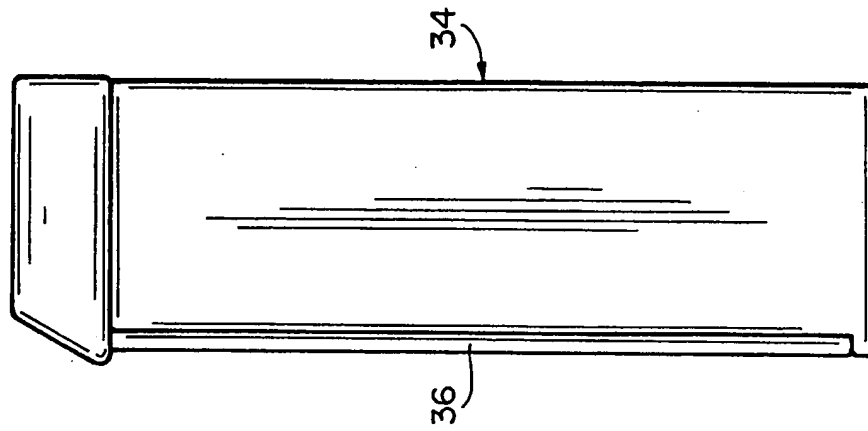


FIG-11

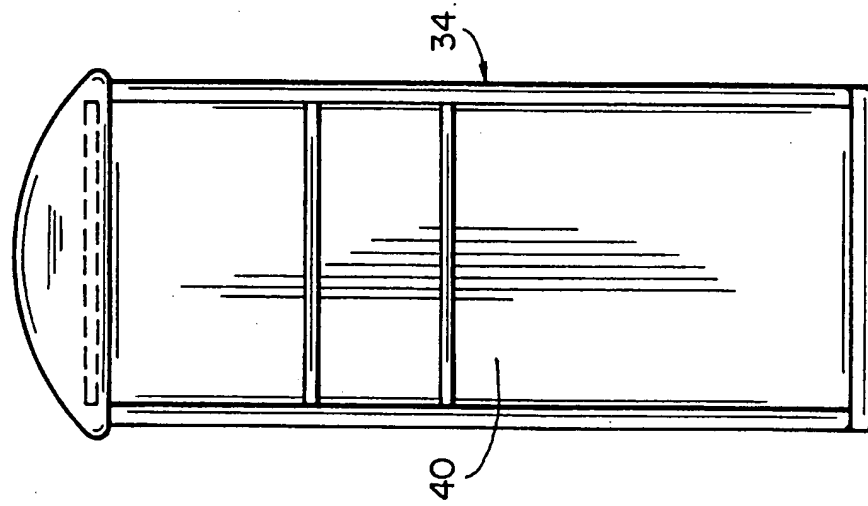


FIG-10

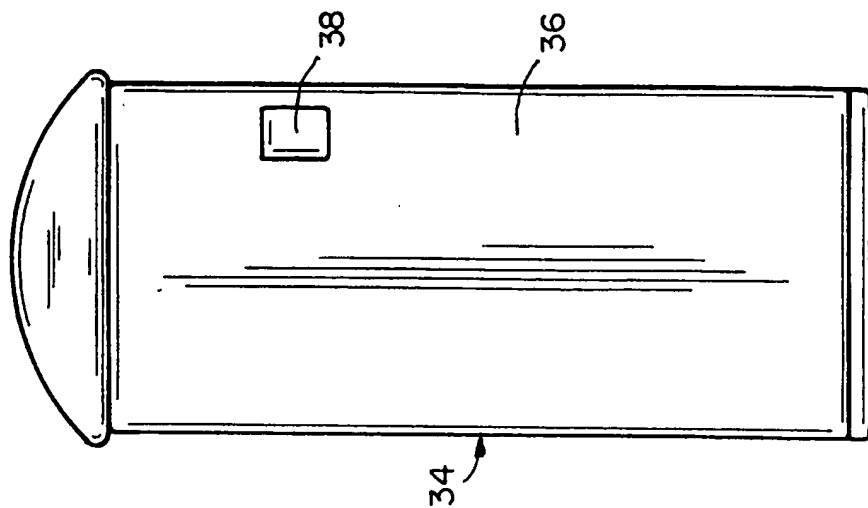


FIG-9

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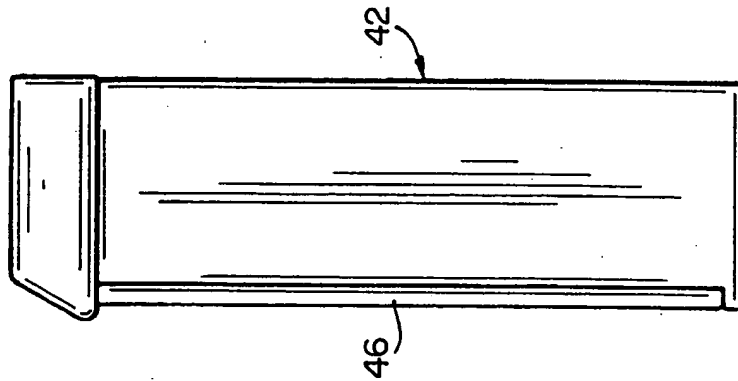


FIG-14

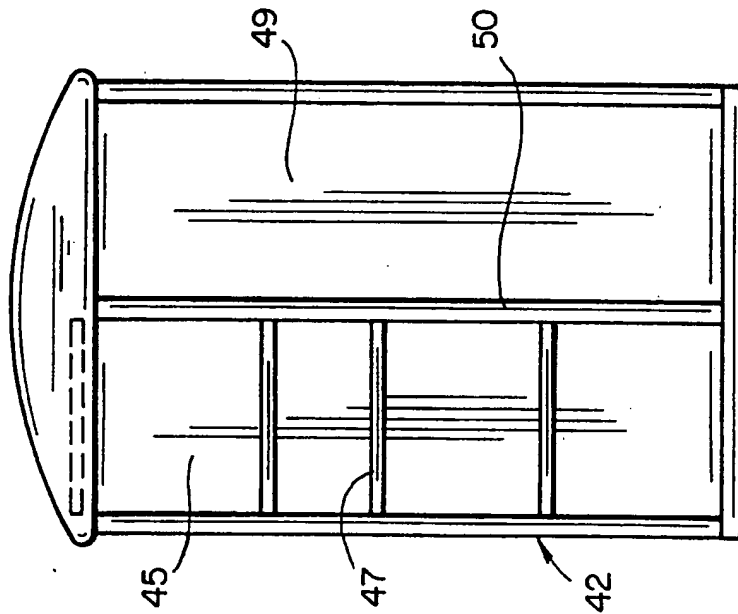


FIG-13

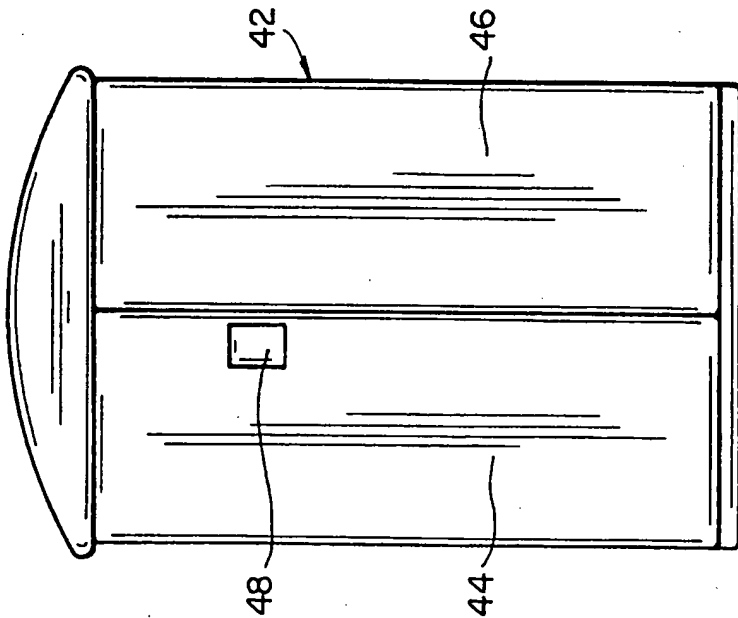


FIG-12

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/15776

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06K 5/00

US CL : 235/382

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 235/382, 376, 381, 385, 435, 462.01

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO APS EAST

search terms: ((deliver\$3 or pick\$) same purchas\$3) and (access near5 enclosure) and ((bar near3 code) or indicia)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,774,053 A (PORTER) 30 June 1998 (30.06.1998), entire document.	1, 4-5, 9, 11, 14, 16-17

A		2-3, 6-8, 10, 12-13, 15

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

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"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

08 December 2000 (08.12.2000)

Date of mailing of the international search report

02 JAN 2001

Name and mailing address of the ISA/US

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Box PCT

Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

Diane I. Lee

Telephone No. (703) 308-0956

Renee P. Pustan